UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,863	11/15/2001	Ivan J. Leichtling	212630	4785

			EXAMINER
45979	7590	12/08/2005	RIVERO, MINERVA

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ART UNIT	PAPER NUMBER
2655	

DATE MAILED: 12/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/002,863	LEICHTLING
	Examiner	Art Unit
	Minerva Rivero	2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>22 November 2005</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-26</u> is/are pending in the application.

   4a) Of the above claim(s) <u>13 and 26</u> is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-2, 4-9, 12, 14-15, 17-22 and 25 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Borella *et al.* (US Patent 6,434,606) in view of Harris *et al.* (US

Patent 6,665,283), further in view of Scott (US Patent 6,665,317).

3. Regarding claims 1 and 14, Borella *et al.* disclose a method of and computer

readable medium for

adding incoming packets of audio data to a buffer (*data packet sequence*, Col. 6,

Line 66 – Col. 7, Line2);

detecting when the buffer contains an amount of audio data which matches a

predetermined threshold amount (*determining whether the buffer is full*, Col. 13, Lines

39-41; Fig. 9, element 1502); and

detecting when a burst has ended (*talk spurt*, Col. 15, Lines 57-63).

However, Borella *et al.* do not explicitly disclose but Harris *et al.* do disclose
when the buffer contains an amount of audio data which matches a threshold amount,
playing the audio data contained in the buffer (*waiting to reach the play-out buffer's
target depth before playing out audio*, Col. 10, Lines 54 - 64); and when a burst has
ended, playing the audio data contained in the buffer (*when the end of a talk spurt is
detected the AUDIO_CTRL data field is set to '1' which signals an application to begin
playing out the vocoded frames*, Col. 11,).

Therefore it would have been obvious to one ordinarily skilled in the art at the
time of the invention to supplement the teachings of Borella *et al.* with when the buffer
contains an amount of audio data which matches a threshold amount, playing the audio
data contained in the buffer, and when a burst has ended, playing the audio data
contained in the buffer, as taught by Harris *et al.* in order to avoid losing audio data due
to a full buffer and to allot time for compensation of missing packets during a talk spurt.

Moreover, the combined teachings of Borella *et al.* and Harris *et al.* do not
explicitly disclose but Scott does disclose determining the amount of jitter accumulated
in the last burst (*calculating jitter buffer size*, Col. 7, Lines 47-50); and waiting for a silent
period based on the amount of accumulated jitter before playing subsequent bursts
(*inserting silence packet based on the jitter buffer size and playing second burst
accordingly*, Col. 7, Lines 47-65; see *bursts* and *inserted silence packet* in Fig. 13).

Therefore it would have been obvious to one ordinarily skilled in the art at the
time of the invention to modify the combined teachings of Borella *et al.* and Harris *et al.*
with determining the amount of jitter accumulated in the last burst and waiting for a

silent period based on the amount of accumulated jitter before playing subsequent

bursts, as disclosed by Scott, in order to manage the jitter buffer in a way as to maintain

the outputted traffic continuous, and maintain the quality and coherency of the voice

data being outputted, as further disclosed by Scott (Col. 7, Line 66 – Col. 8, Line 4).

4.   Regarding claims 2 and 15, Borella *et al.* do not explicitly disclose but Harris *et*

al. do disclose each of said bursts includes an end packet, wherein the step of detecting

when a burst has ended comprises detecting an end packet (*end of talk spurt is*

detected, Col. 11, Lines 5-9).

Therefore it would have been obvious to one ordinarily skilled in the art at

The time of the invention to supplement the teachings of Borella *et al.* with having each

of the bursts include an end packet and wherein the step of detecting when a burst has

ended comprises detecting an end packet, as taught by Harris *et al.* so as to enable the

buffering process by positively identifying speech packets.

5.   Regarding claims 4 and 17, Borella *et al.* further disclose periodically adjusting

the threshold (*periodic evaluation of jitter buffers and alternation of jitter buffer used*,

Col. 6, Lines 57-65; Col. 10, Lines 62-65).

6.   Regarding claims 5 and 18, Borella *et al.* further disclose periodically measuring

a length of a burst; and resetting the threshold to factor of the length of the most

recently measured burst (Col. 11, Lines 27-32; Col. 17, Lines 25-26; *sensitivity settings*,

Col. 19, Lines 18-28; *using first or second order statistics in a buffer selection scheme*,

Col. 19, Lines 41-53; *burst basis*, Col, 19, Lines 29-40).

7.   Regarding claims 6 and 19, Borella *et al.*, further disclose

measuring respective jitter times between packets received during a current

sample period to determine a measured jitter amount (*burst basis* and *current delay*,

Col. 19, Lines 29-40; *variation of delay*, Col. 19, Lines 42-51);

calculating an adjusted threshold time as a factor of the measured jitter amount

(Col. 11, Lines 27-32; Col. 17, Lines 25-26; *sensitivity settings*, Col. 19, Lines 18-28;

using first or second order statistics in a buffer selection scheme, Col. 19, Lines 41-53;

burst basis, Col, 19, Lines 29-40); and

resetting the threshold to the adjusted threshold time to be applied during a

subsequent sampling period (*computationally-desirable jitter buffer* and *subsequent talk

spurt*, Col. 15, Lines 43-56; *resetting jitter buffer*, Col. 11, Lines 24-32).

Regarding claims 7 and 20, Borella *et al.* disclose each sampling period is one of

said bursts (*burst basis*, Col. 19, Lines 29-31).

8.   Regarding claim 8, Borella *et al.* disclose each sampling period is a

predetermined period of time (*sampling rate may have a constant period*, Col. 18, Lines

12-14).

9.　　Regarding claims 9 and 22, Borella *et al.* disclose setting the threshold at a value during an initial sampling period (*buffers have associated buffer values*, Col. 15, Lines 37-42).

10.　　Regarding claims 12 and 25, Borella *et al.* further disclose repeating the measuring, calculating and resulting steps during each sampling period (*buffers are periodically evaluated and selected*, Col. 15, Lines 57-67).

11.　　Claims 3 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borella *et al.* (US Patent 6,434,606) in view of Harris *et al.*, further in view of Scott (US Patent 6,665,317) and further in view of Anandakumar *et al.* (US Patent 6,801,532).

12.　　Regarding claims 3 and 16, the combined teachings of Borella *et al.*, Harris *et al.* and Scott do not explicitly disclose, but Anandakumar *et al.* do disclose each end packet includes an end flag (*talkspurt flag or silence flag*, Col. 50, Lines 49-54).

Therefore it would have been obvious to one ordinarily skilled in the art at the time of the invention to supplement the combined teachings of Borella *et al.*, Harris *et al.* and Scott with having each end packet include an end flag as taught by Anandakumar *et al.* in order to facilitate the buffering process by positively identifying speech packets.

13.   Claims 10-11 and 23-24 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Borella *et al.* (US Patent 6,434,606) in view of Harris *et al.* (US

Patent 6,665,283), further in view of Scott (US Patent 6,665,317), and further in view of

Orleth *et al.* (US Patent 5,872,789).

14.   Regarding claims 10 and 23, the combined teachings of Borella *et al.*, Harris *et*

al. and Scott do not explicitly disclose, but Orleth *et al.* do disclose

        determining an average jitter time between at least some of the packets in

the sample period (Col. 1, Lines 47-57);

        the adjusted threshold time equaling at least the average jitter time (*cells are*

read at the average value of the jitter that has occurred, Col. 2, Lines 37-43).

        Therefore it would have been obvious to one ordinarily skilled in the art at the

time of the invention to supplement the combined teachings of Borella *et al.*, Harris *et al.*

and Scott with determining an average jitter time between at least some of the packets

in the sample period and the adjusted threshold time equaling at least the average jitter

time, as taught by Orleth *et al.*, since Orleth *et al.* teach that processing the packets in

this manner reduces jitter (Col. 1, Lines 55-56).

15.   Regarding claims 11 and 24, the combined teachings of Borella *et al.*, Harris *et*

al. and Scott do not explicitly disclose, but Orleth *et al.* do disclose the adjusted

threshold time equals more than the average jitter time (correction

quantity is added to the average result, Col. 2, Lines 4-9).

Therefore it would have been obvious to one ordinarily skilled in the art at the

time of the invention to supplement the combined teachings of Borella *et al.* and Harris

et al. with having the adjusted threshold time equal more than the average jitter time, as

taught by Orleth *et al.*, since this is associated with the successful compensation of

probable rounding errors during processing of the packets, as taught by Orleth *et al.*
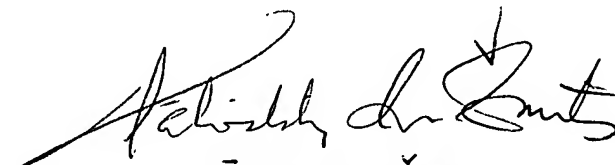
(Col. 2, Lines 10-13).

Conclusion

16.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Minerva Rivero whose telephone number is (571) 272-

7626. The examiner can normally be reached on Monday-Friday 9:00 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Wayne Young can be reached on (571) 272-7582. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MR 12/5/05

TĀLIVALDIS IVARS ŠMITS
PRIMARY EXAMINER